

WATER, WASTEWATER AND DISTRIBUTION SYSTEM OPERATORS

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THE JOB

- Drinking water, wastewater, and distribution system operators are critical for the protection of public health, the environment, and for the operation and maintenance of safe and reliable water and wastewater treatment facilities and distribution and collection facilities. Operators are skilled professionals that ensure safe delivery of drinking water to our homes and the safe treatment and disposal of our wastewater.
- Most of us go through our everyday lives and don't give any thought as to where the water comes from when we turn on the tap to get a drink of water or where it goes when we flush our toilets. Water and wastewater treatment plant operators know exactly where that water comes from, where it goes and what happens to it to make it safe for use, human consumption, and the environment. Consumers only rely on what they can see, taste or smell to determine if they have good water,
- Working as a water or wastewater treatment plant operator can be a dirty and even dangerous job, but it can also be a very rewarding. After all, when you think about it, you the operator are responsible for the health and well-being of entire communities. Whether you are treating the water or wastewater for a single person or millions of consumers, their well-being is in your hands.
- Teamwork, good communication, working with others and respect are key essential components to the job. They must be able to analyze and solve problems when they occur.



WHAT THEY DO

- Operators at drinking water and wastewater treatment plants provide one of the most valuable services to Americans. Operators work in vital jobs that we can't do without. Follow this link to view a video on, "What does it takes to be an operator," <http://www.youtube.com/watch?v=S1wUOad-0ag>
- **WATER TREATMENT PLANT OPERATORS** have a huge responsibility in providing safe water to their customers. They are responsible for taking water from wells, rivers, lakes and aquifers and making it safe to use and drink. An operator may work in a large highly technical reverse osmosis plant or they may work alone in a small plant that only requires them to disinfect the water. The water plant operator oversees the water processes (sedimentation, filtration, and disinfection) in a water plant and makes necessary adjustments to ensure compliance with all Federal and State standards and guidelines. Plant operators' duties typically include running and maintaining plant equipment, testing water samples and chemically treating the water, among other tasks. A water plant operator typically also makes regular physical inspections of the plant on an hourly or semi-hourly basis by walking around the plant and observing the performance of each piece of equipment. He customarily records the information manually or by using a handheld computerized device. The water treatment industry is increasingly more technical every day as equipment becomes automated and as Federal and State regulations become more stringent.
- **WASTEWATER TREATMENT OPERATORS** take the used water and make it safe to release into the environment again. It's not a job for the faint of heart. When the water arrives at the plant it is pretty nasty. It looks bad, smells bad and certainly would taste bad if you had to drink it. By the time the water leaves the plant it is cleaner than most surface waters that may be used in a water treatment plant. And even though machines do most of the cleaning, human intervention is required from time to time. They oversee the operation and maintenance of pumps, motors and other equipment and make any necessary adjustments. Wastewater treatment operators also take water samples to ensure that it meets quality standards.
- **WATER DISTRIBUTION OPERATORS** are responsibility for ensuring that safe, potable water reaches everyone's tap. Communities need qualified, capable and dedicated operators to operate, maintain, repair and manage the distribution facilities. Their role and duties may include operating and maintaining wells and storage tanks, maintaining and repairing the distribution system, maintaining water quality in the system, disinfecting new and repaired facilities as well as water delivered to consumers. They must be able to recognize hazards and developing safe procedures and programs. The water distribution operator may be required to test the water, draw samples and transport them to a lab and follow chain of custody procedures to ensure the chain is unbroken from start to finish.



WORKING CONDITIONS

- Water and wastewater treatment plant operators work both indoors and outdoors.
- They may have to climb, reach, and stoop and handle heavy items.
- Occupational hazards include slips and falls, noisy equipment, unpleasant odors, exposure to toxic gases (like hydrogen sulfide, chlorine and ammonia) and injuries from heavy machinery. The U.S. Bureau of Labor Statistics (BLS) reports that the rate of accidents and illnesses is higher than average for these workers. Systems have developed programs to prevent dangerous work environments and prevent exposure to dangerous chemicals.
- Because water and wastewater treatment plants operate twenty-four hours a day, plant operators work eight-hour shifts on a rotating basis. They balance night, weekend, and holiday work schedules.



SALARY

- A career in the water and wastewater industry offers good pay and benefits.
- According to the Bureau of Labor Statistics, The median annual wage of water and wastewater treatment plant and system operators was \$40,770 in May 2010. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$24,860, and the top 10 percent earned more than \$63,680.



EMPLOYMENT OUTLOOK

- There are over 13,000 licensed water, wastewater and distribution system operators working at over 5,300 public water systems and over 2,000 domestic wastewater treatment facilities throughout Florida. Most are employed with local governments. Others work for private water and wastewater utilities and service companies.

Estimated number of workers with drinking water licenses	3,420
Estimated number of workers with distribution system licenses	3,800
Estimated number of workers with wastewater licenses	4,700

- The Bureau of Labor Statistics estimates that employment of water and wastewater treatment plant and system operators is projected to grow 12 percent

from 2010 to 2020, about as fast as the average for all occupations. Job prospects are expected to be excellent. As the population continues to grow and more people move to Florida demand should grow for water and wastewater treatment facilities. Openings will also occur as a result of experienced workers retiring or leaving the field. Although most jobs will be with local governments, opportunities can be found in the expanding private water and wastewater treatment industry. Currently in Florida there are approximately 700 operator positions available each year as a result of vacancies.

- Candidates who are adept at problem solving and possess computer and mechanical skills should enjoy the best prospects.



WAGES, HOURS, AND FRINGE BENEFITS

- Salaries vary with the size of the plant, the type of plant, the location; and the duties and skills of the operator, as well as their education, experience, and level of certification. Shown below are some as-advertised salary ranges for both Water, Wastewater and Distribution System Operators.
 - Entry Level..... \$16,000 - \$30,000
 - Water Foreman..... \$41,700 - \$66,272
 - Utilities Supervisor..... \$49,816 - \$76,253
 - Director..... \$80,000 - \$110,000
- Operators normally work rotating shifts; weekends included, and are paid a shift differential for swing or graveyard shifts. Overtime hours may be necessary when emergencies occur and are generally paid at time and one-half or double time rates. Benefits include paid vacation, holidays and sick leave; health, dental and vision insurance; and retirement plans.



EDUCATION AND TRAINING

- Florida Statutes require anyone who is in on-site charge of the actual operation, supervision, and maintenance of a water treatment plant, water distribution system or a domestic wastewater treatment plant to be licensed by the Florida Department of Environmental Protection (FDEP). To qualify for licensure an applicant must meet minimum educational and work experience requirements for each class of license. A passing score is required on the exam for the type and level license desired.
- Licensure for water and wastewater plant operators consists of classes A, B, C, and D. Distribution system operators consists of levels 1, 2, 3,4. Class C and

Level 3 are the entry levels for these careers. Class A and level 1 are the highest category of operator for their respective license type. Class D and level 4 are considered to be an owner operated type of system.

- The minimum licensure requirements include:
 - A high school diploma or equivalent is the minimum educational requirement for licensure.
 - Successful completion of a Department-approved training course.
 - Document the appropriate amount of operational experience.
 - Pass the appropriate exam.
- There is no requirement to meet the experience requirement prior to taking the exam. Anyone passing the exam and only needing the experience for licensure definitely has a leg up on those that haven't passed the exam.
- As operators gain experience and attain higher certification levels they generally move into managerial positions.



VETERAN ASSISTANCE

- Veterans can have their training, exam and license fees paid for by the VA. Basically, it is paid under the GI Bill eligibility, up to \$2000. The program must be a VA approved program of which Florida's Operator Certification Program is one.
- Veterans can also receive a stipend from the VA up to \$1500 a month while working at an approved training facility. As an example, the City you are working at would contact the VA, apply to become an approved training provider, a VA rep would do an inspection and give them the designation. Then, veterans that become employed with that City would be eligible to receive the \$1500 while they do their OJT.
- http://www.gibill.va.gov/resources/education_resources/programs/licensing_and_certification.html
- Do you have an AFSC, MOS or are you working in water or wastewater treatment? Well your military experience with water and wastewater may help you to meet experience requirement for licensure. FDEP operator certification staff can help you evaluate the training and experience you have and how it would apply in Florida.



APPROVED TRAINING COURSES

- Only courses approved by FDEP are valid for examination eligibility purposes.

- Various on-line and college approved courses are available. Courses are valid for five years from the date of completion.
- Approved courses are listed in FDEP's operator handbooks and can be found at the following website: <http://www.dep.state.fl.us/water/wff/ocp/pubs.htm>



WHERE TO LOOK FOR A JOB

- Job seekers should contact the human resources or personnel departments of one or more of the following job sources:
 - State, county, and city water departments
 - Private Water Districts
 - College placement centers
 - Water Management Associations
 - Newspaper help-wanted ads
 - Florida Rural Water Association classifieds at <http://www.frwa.net/MainPages/CLASSIFIEDS.htm>
 - Florida Water Resources Journal classifieds at <http://www.fwrj.com/classadview.asp?cat=PA>
 - Florida Water and Pollution Control Operators Association job board at <http://www.fwpcoa.org/jobBoard.asp>



WHAT ARE THE STEPS TO BECOMING A LICENSED OPERATOR

1. Do you have a high school diploma or equivalent? If you do, you have completed the first step. If you don't, contact the Florida Department of Education for details on how to get your GED. Florida adults who don't have a high school diploma can earn a high school equivalency credential by taking the GED® Test. The GED® exam is administered only through Official GED® Testing Centers and cannot be taken online. The GED® test credential is recognized nationwide and is accepted by more than 95% of U.S. employers, colleges and universities. Starting in 2014, there will be a new GED test. This new test will be computer-based, more expensive (\$130 in Florida), and require some content knowledge from Common Core Standards. It will offer dual performance levels where test-takers can earn the high school equivalency credential as well as an additional endorsement that indicates career and college- readiness.
2. Complete an approved Florida Department of Environmental Course. While you don't need to complete a course to get hired somewhere, it improves your odds of getting a job because once you complete the course you have knowledge that you can apply to the job.

3. While this step is not required you can sign up for and take a Florida Rural Water Association refresher course. If it's been awhile since your course completion or if you are looking to tune up the information you learned during your course you should take this course. It's free so why not. Take it just before taking the FDEP exam.
4. Apply through FDEP to take the operator exam. The exam is computer-based and is given at multiple locations around the State. Once approved by FDEP you can schedule a time and location for the exam that fits your schedule.
5. Once you have passed the exam, it's time to apply for that job if you haven't already. If you have passed the exam you just increased your odds of finding a job. The employer recognizes that the only thing standing between you and a license is job experience. This makes you more marketable.
6. Document your work experience detailing your employment dates, position title, hours worked, description of duties, and a description of treatment type. Your employer or supervisor must sign off on your experience.
7. Once you reach 2,080 hours of experience, apply for your license. You have now completed all the requirements for licensure.
8. FDEP will issue your license and a wall certificate. Place the certificate in a prominent location and be proud of your accomplishment.
9. Have a great career.



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